Robust Predictions in Games with Incomplete Information (with Stephen Morris)

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ABSTRACT

We analyze games of incomplete information and offer equilibrium predictions which are valid for all possible private information structures that the agents may have. This characterization of the equilibrium outcome distributions, which is robust to the private information structure, relies on an epistemic result which establishes a relationship between the set of Bayes correlated and Bayes Nash equilibria.

We completely characterize the set of equilibria in a class of games with quadratic payoffs in terms of restrictions on the first and second moments of the equilibrium action-state distribution. Finally, we reverse the perspective and investigate the identification problem under concerns for robustness to private information. We show how the presence of private information leads to partial rather than complete identification of the structural parameters of the game.